



CHAT-PUB

Helper of welfare policy for youth

김강산
양승빈
박진호
전창민



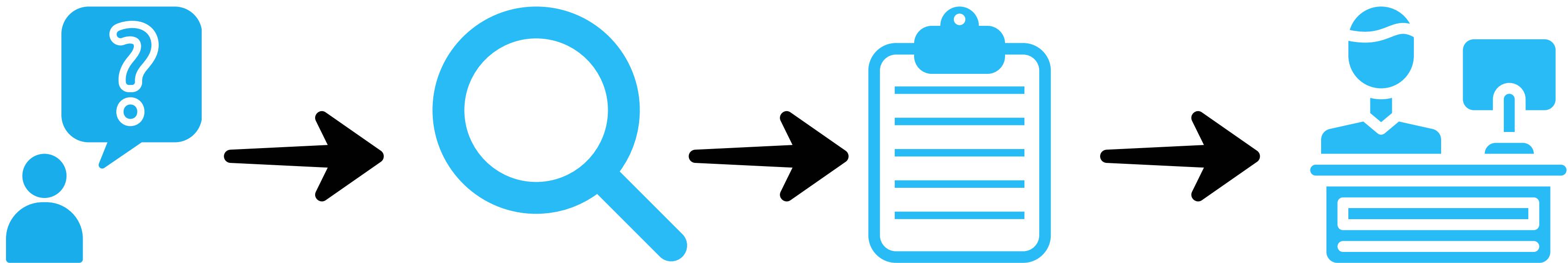


CONTENTS

- **TOUCH ON MOTIVATION**
- **TECHINAL BACKGROUND**
- **BERT**
- **SENTENCE TRANSFORMER**
- **PROCESS ON FRONT/BACK**

MOTIVATION

PROCESS EXPLAINED



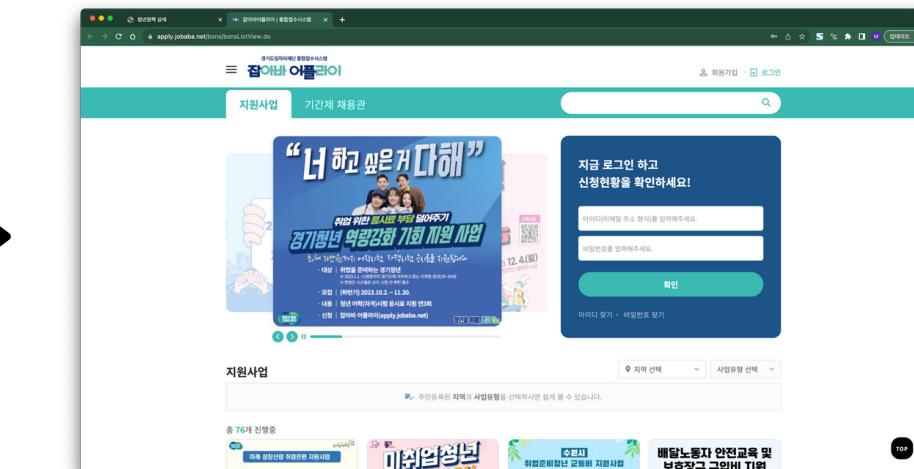
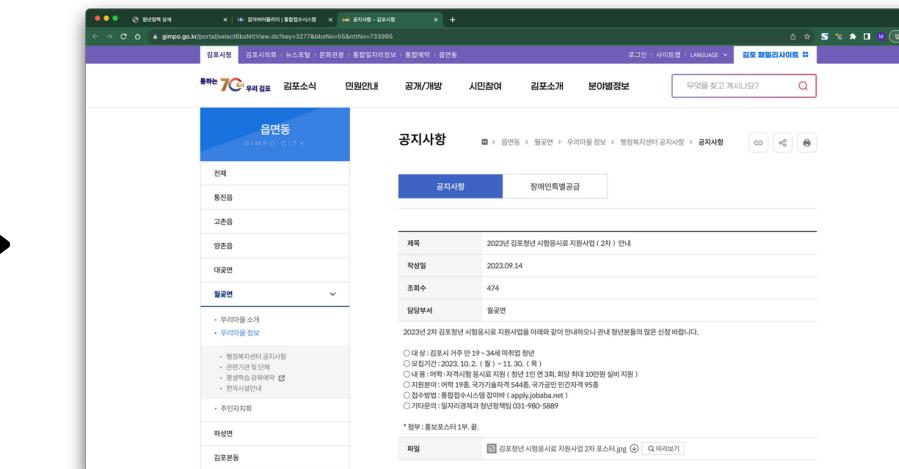
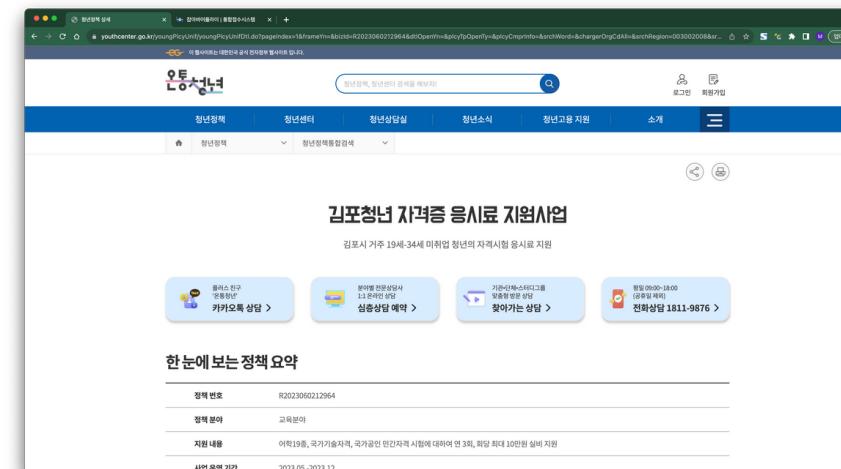
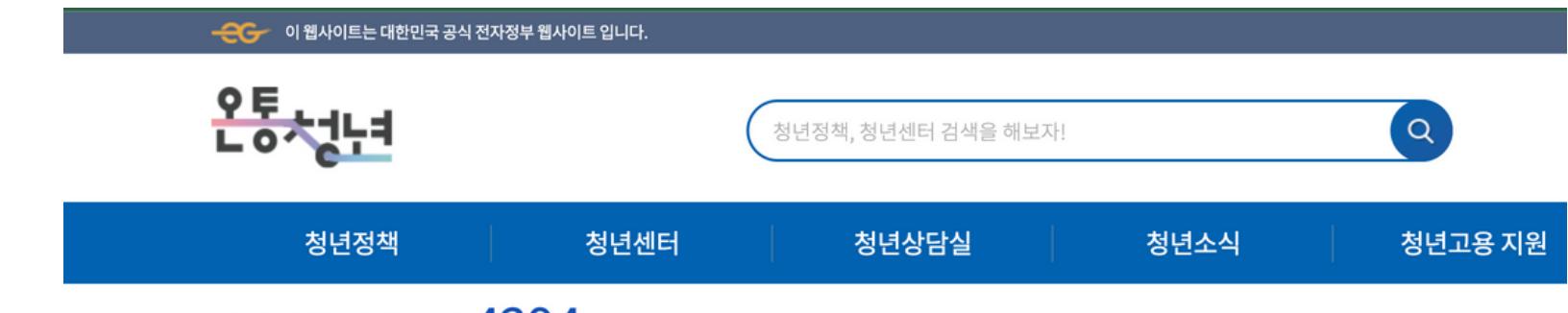
MOTIVATION

DIFFICULTIES IN THE PROCESS

1 People does not know what policies are available, and how certain polices can help them

2 EVEN WITH FILTERING OPTION, THE SHEER VOLUME OF OVER 4,000 POLICIES PRESENTED ON THE WEBSITE CAN BE OVERWHELMING FOR USERS

3 NOT ALL YOUNG PEOPLE CAN READILY GO THROUGH THE DETAILS AND EASILY APPLY FOR POLICIES



MOTIVATION

LIMITAION ON GOVERNMENT PROPOSED SOLUTION



플러스 친구
'온통청년'

[카카오톡 상담 >](#)



분야별 전문상담사
1:1 온라인 상담

[심층상담 예약 >](#)



기관·단체·스터디그룹
맞춤형 방문 상담

[찾아가는 상담 >](#)



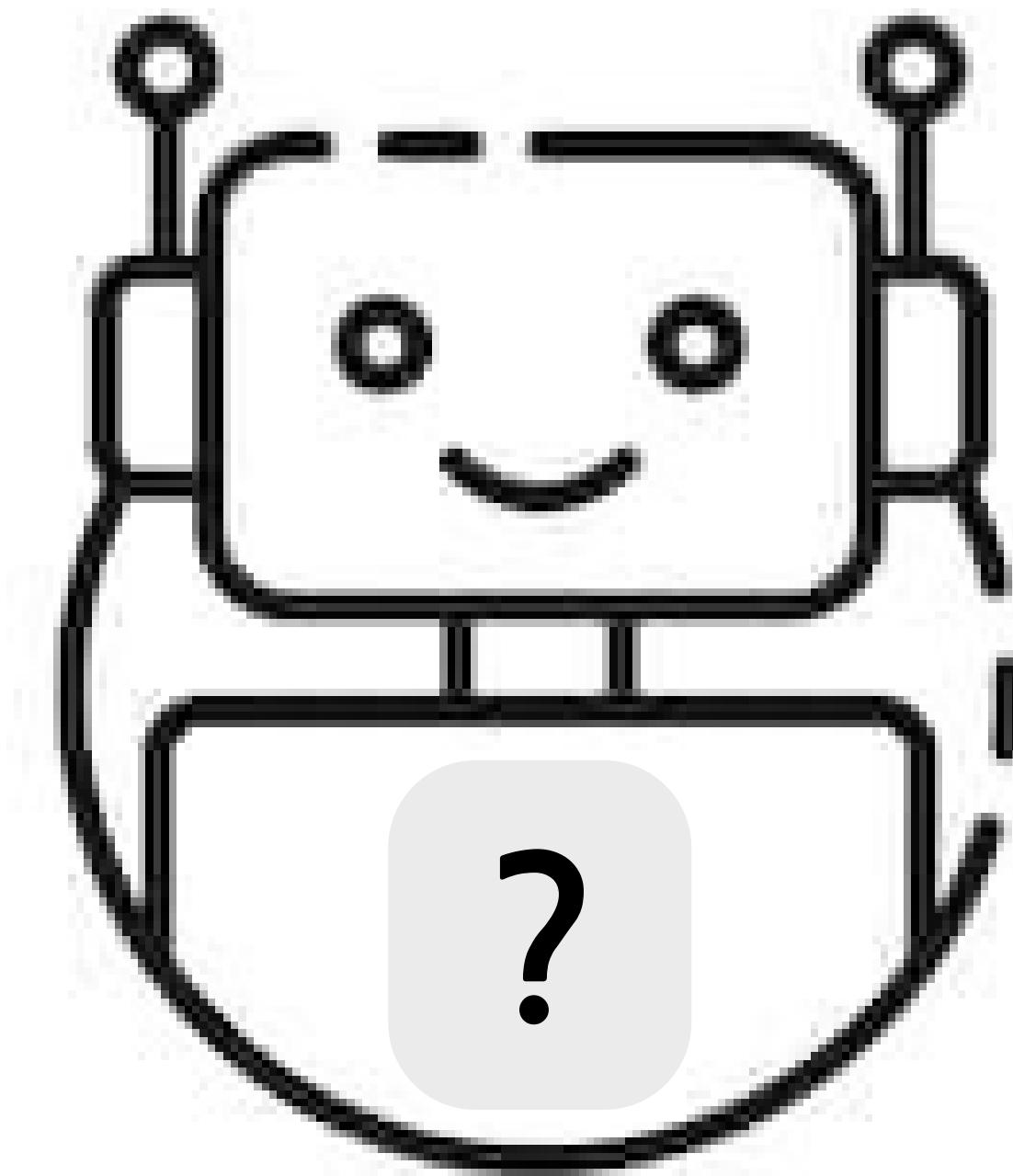
평일 09:00~18:00
(공휴일 제외)

[전화상담 1811-9876 >](#)



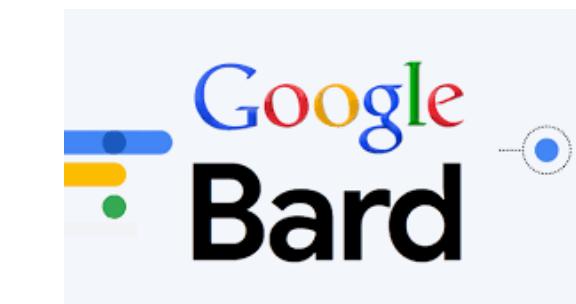
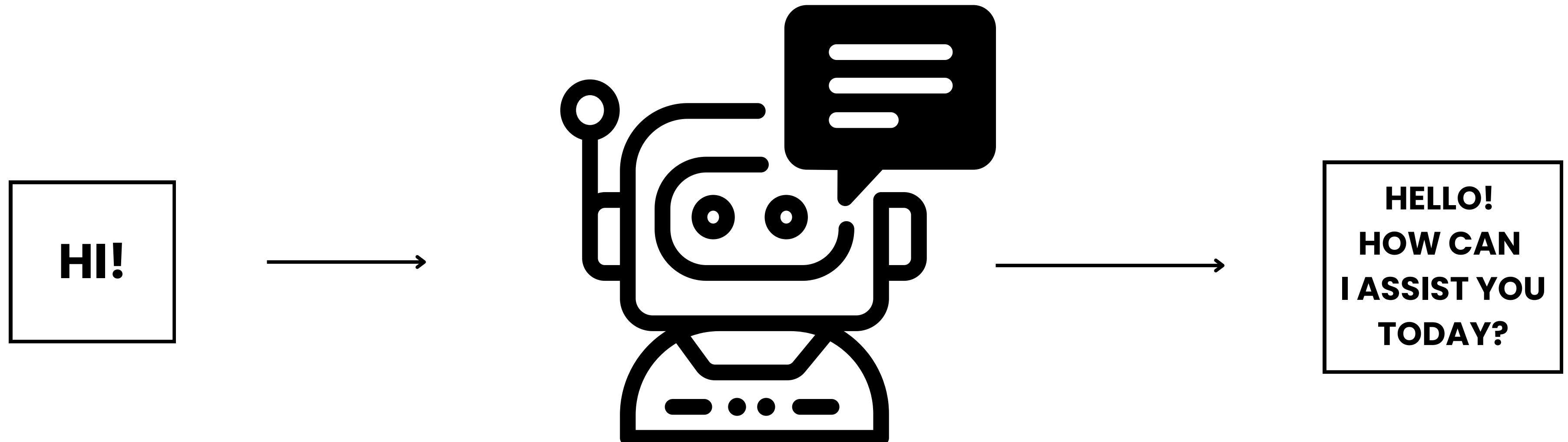
TECHNICAL BACKGROUND

CHATBOT



TECHNICAL BACKGROUND

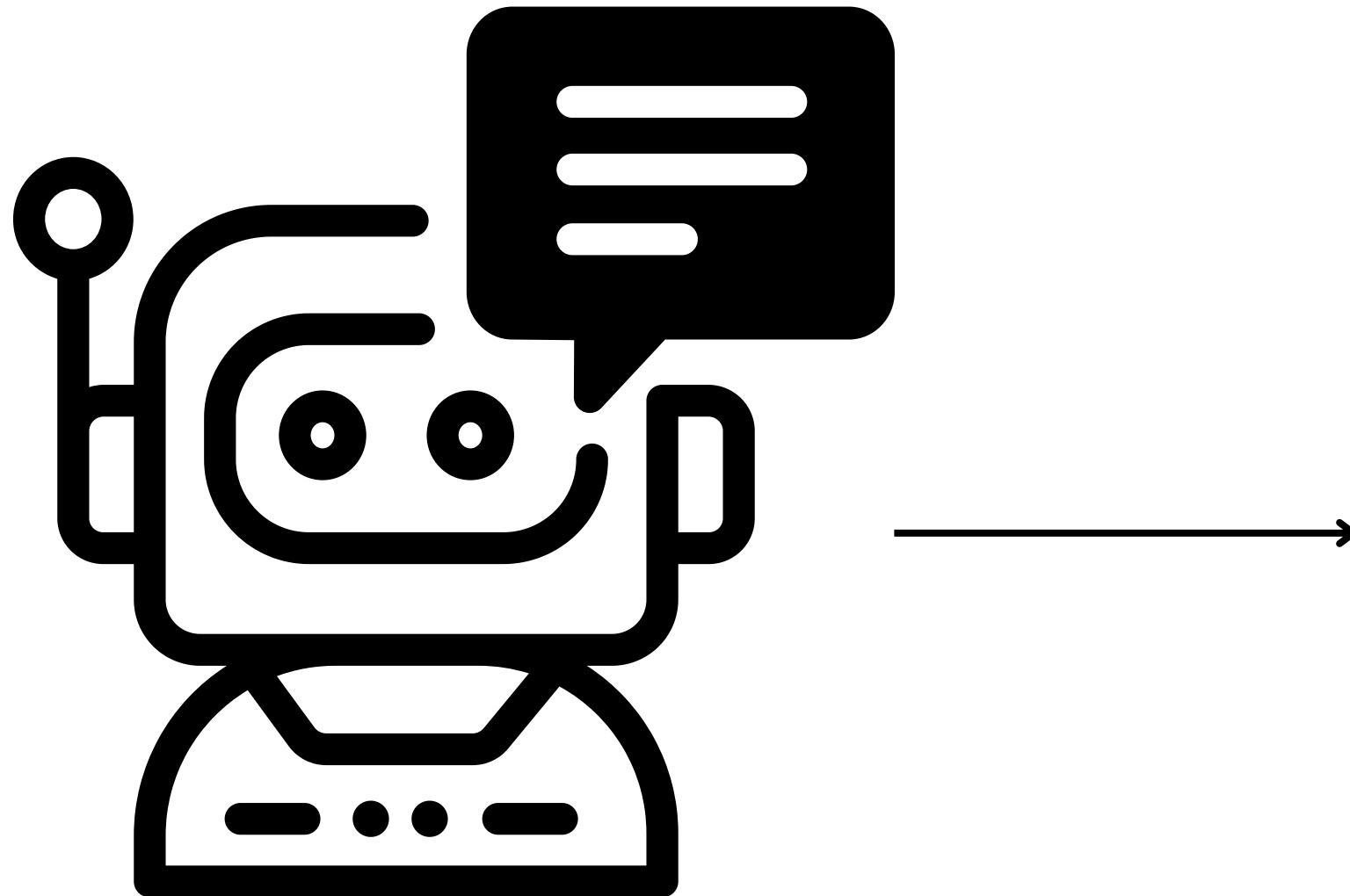
GENERATIVE MODEL



TECHNICAL BACKGROUND

GENERATIVE MODEL

TELL ME ABOUT THE
ACADEMIC
SCHEDULE OF
SUNGKYUNKWAN
UNIVERSITY



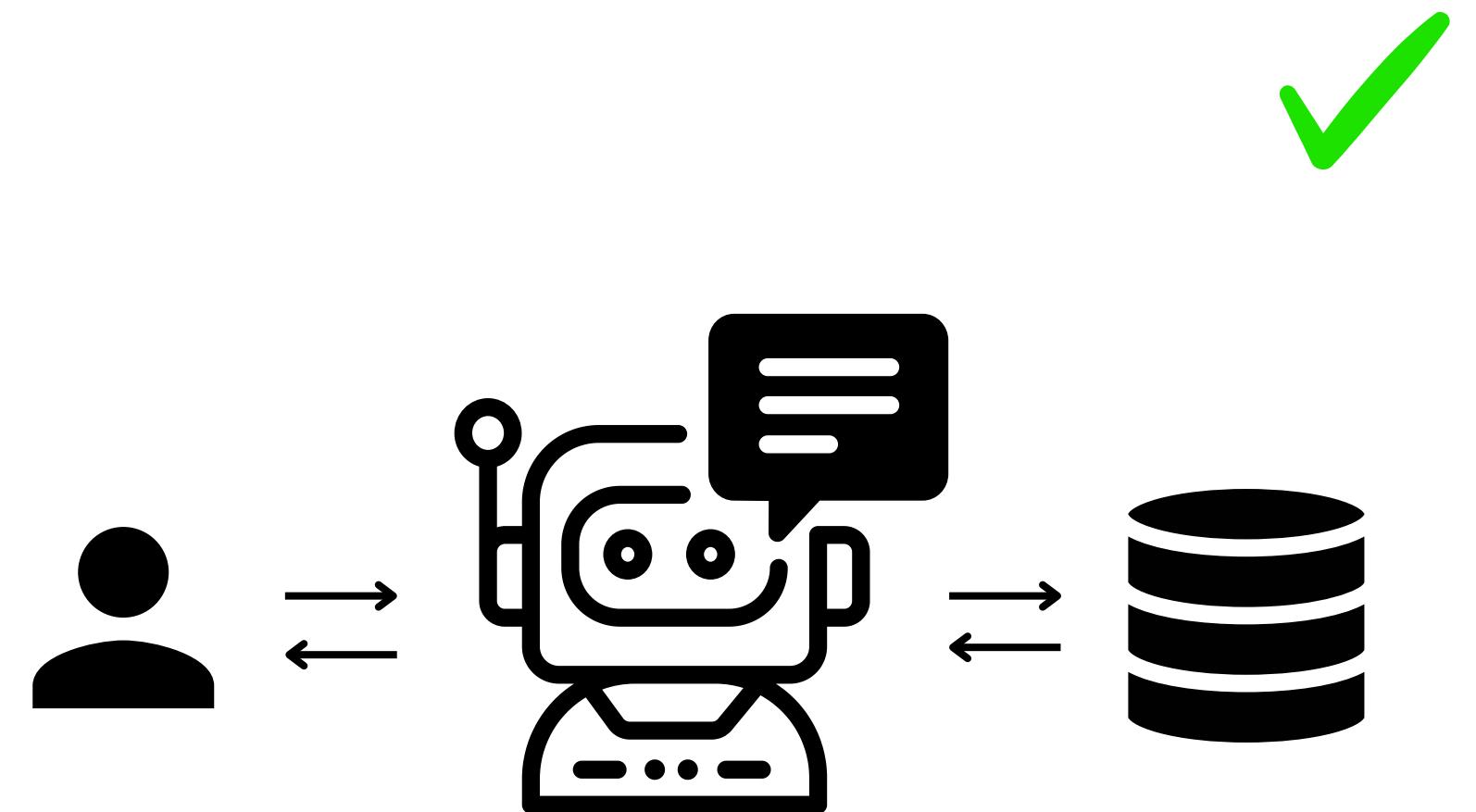
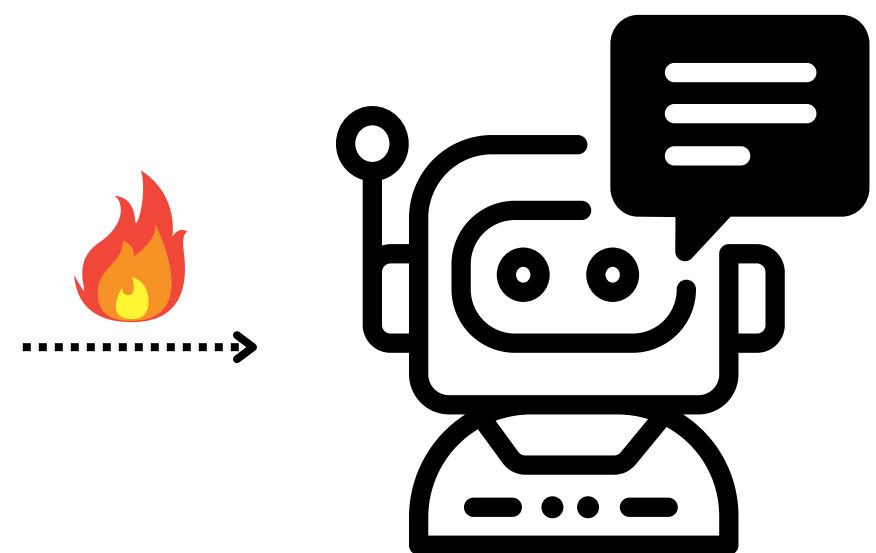
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TECHNICAL BACKGROUND

GENERATIVE MODEL



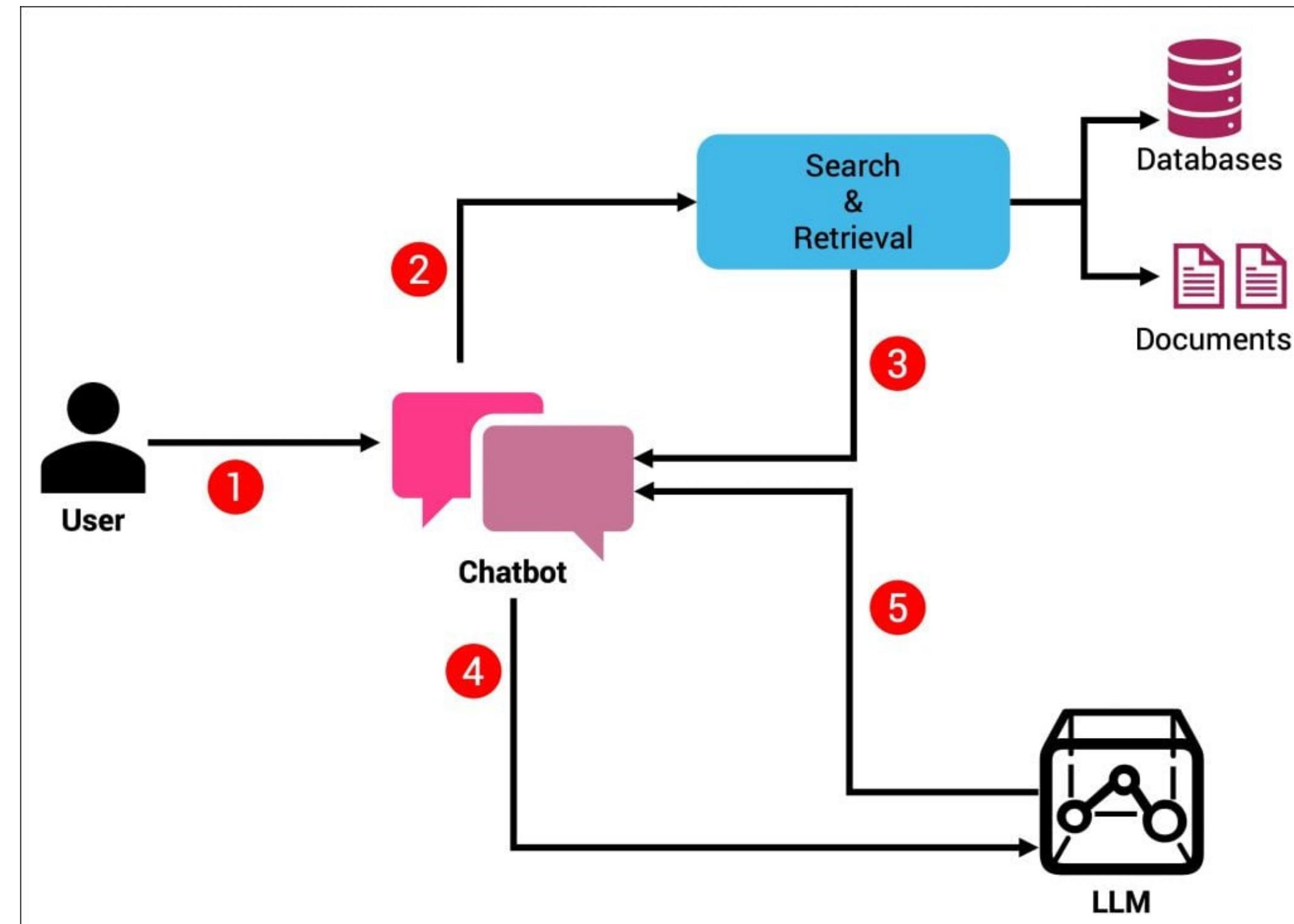
TRAINING



**Retrieval
Augmented
Generation**

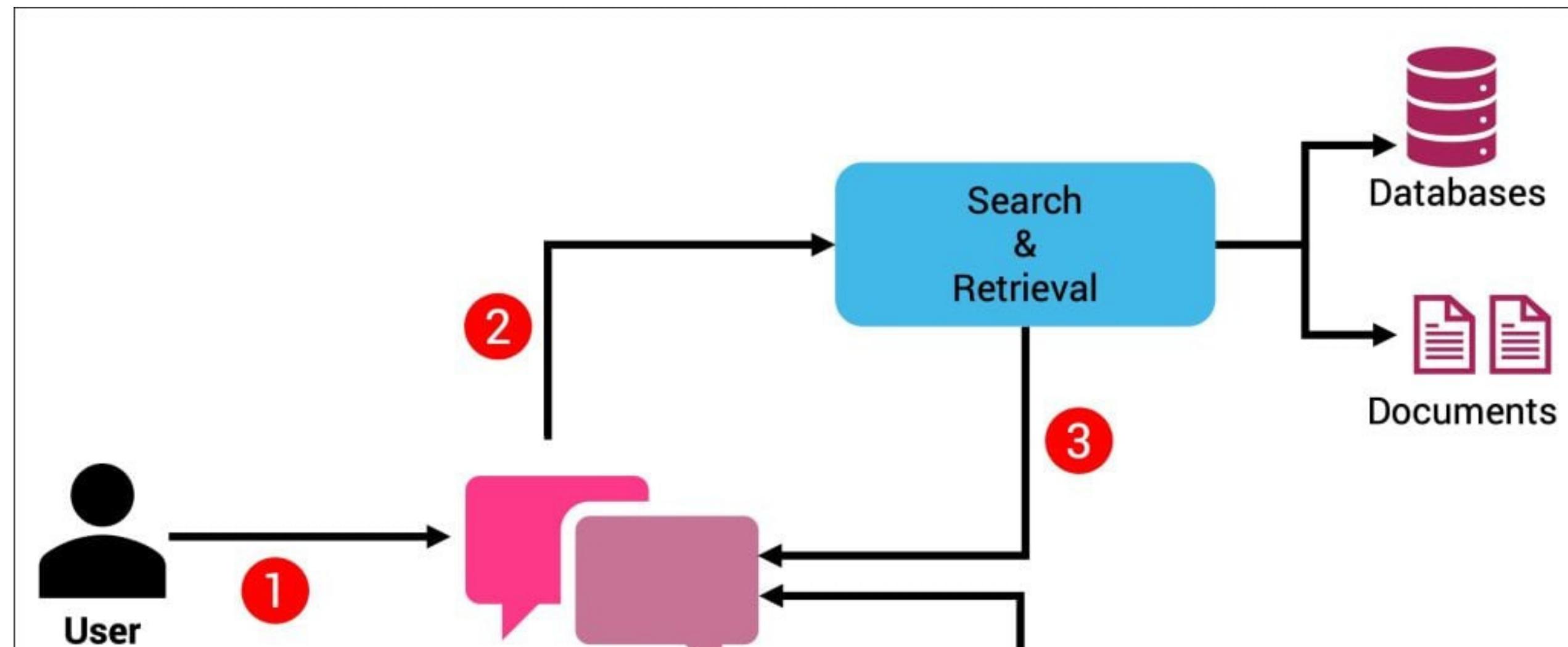
TECHNICAL BACKGROUND

RETRIEVAL AUGMENTED GENERATION



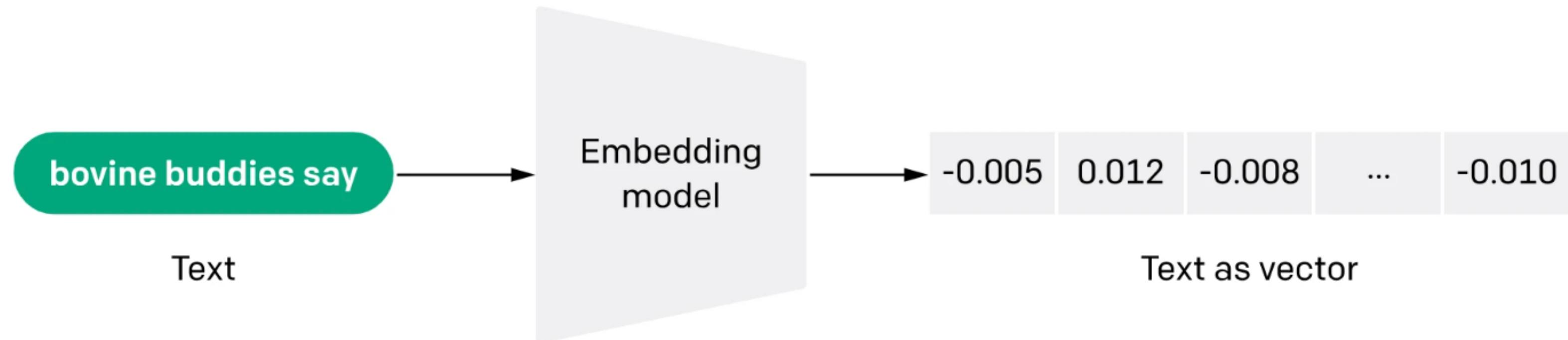
TECHNICAL BACKGROUND

RETRIEVAL AUGMENTED GENERATION – RETRIEVAL



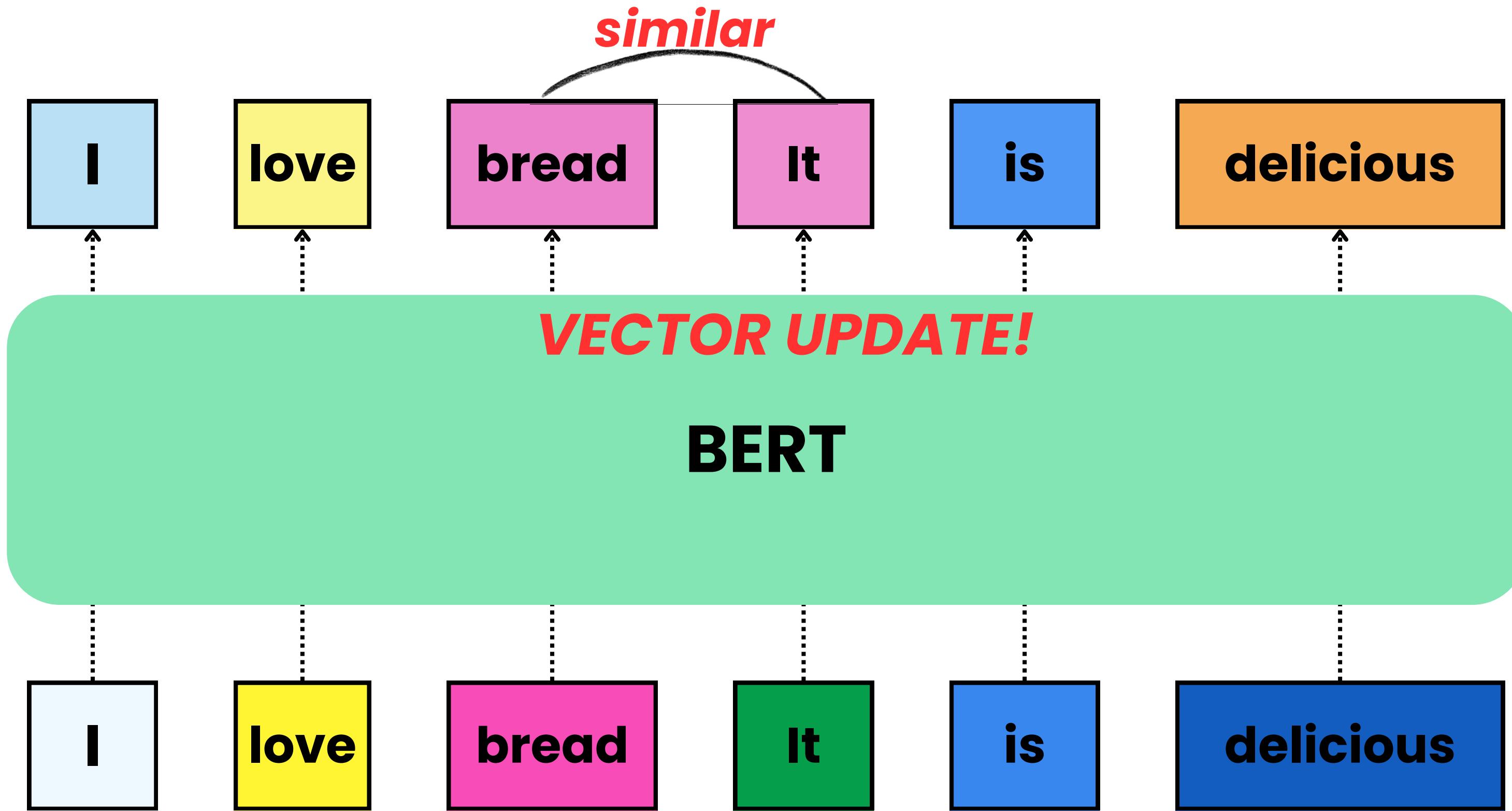
TECHNICAL BACKGROUND

RETRIEVAL AUGMENTED GENERATION – RETRIEVAL



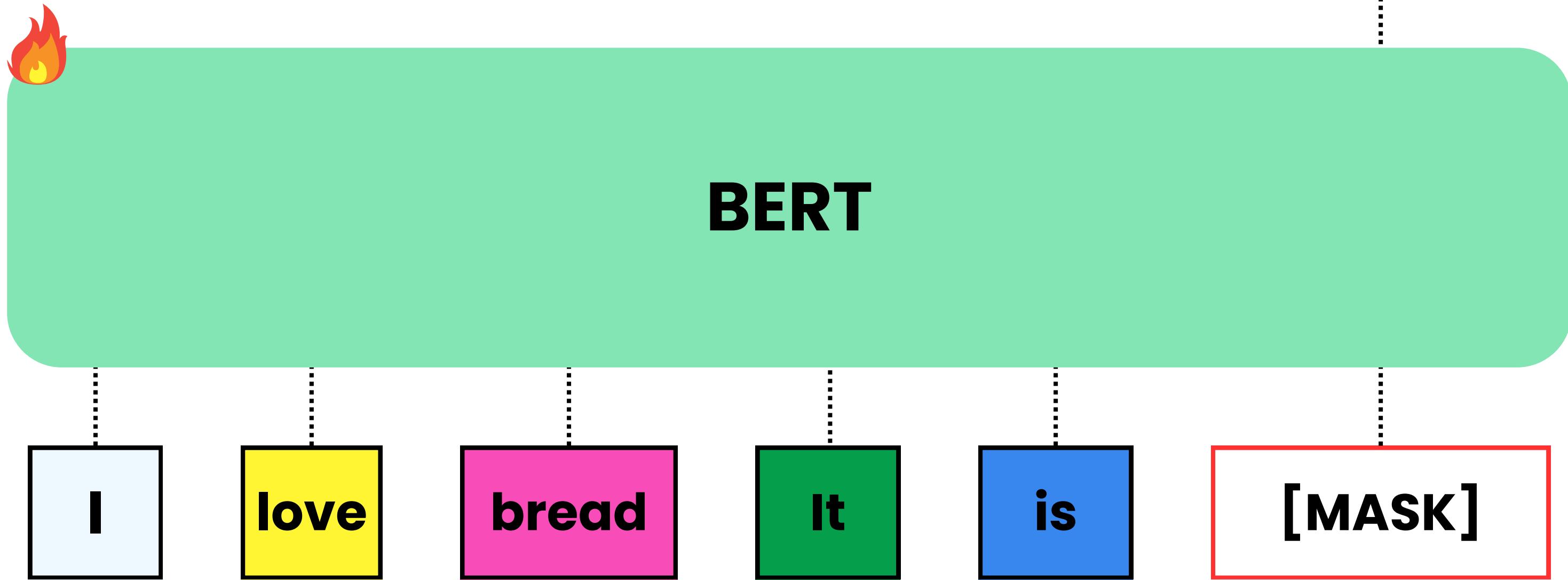
TECHNICAL BACKGROUND

RETRIEVAL AUGMENTED GENERATION – RETRIEVAL



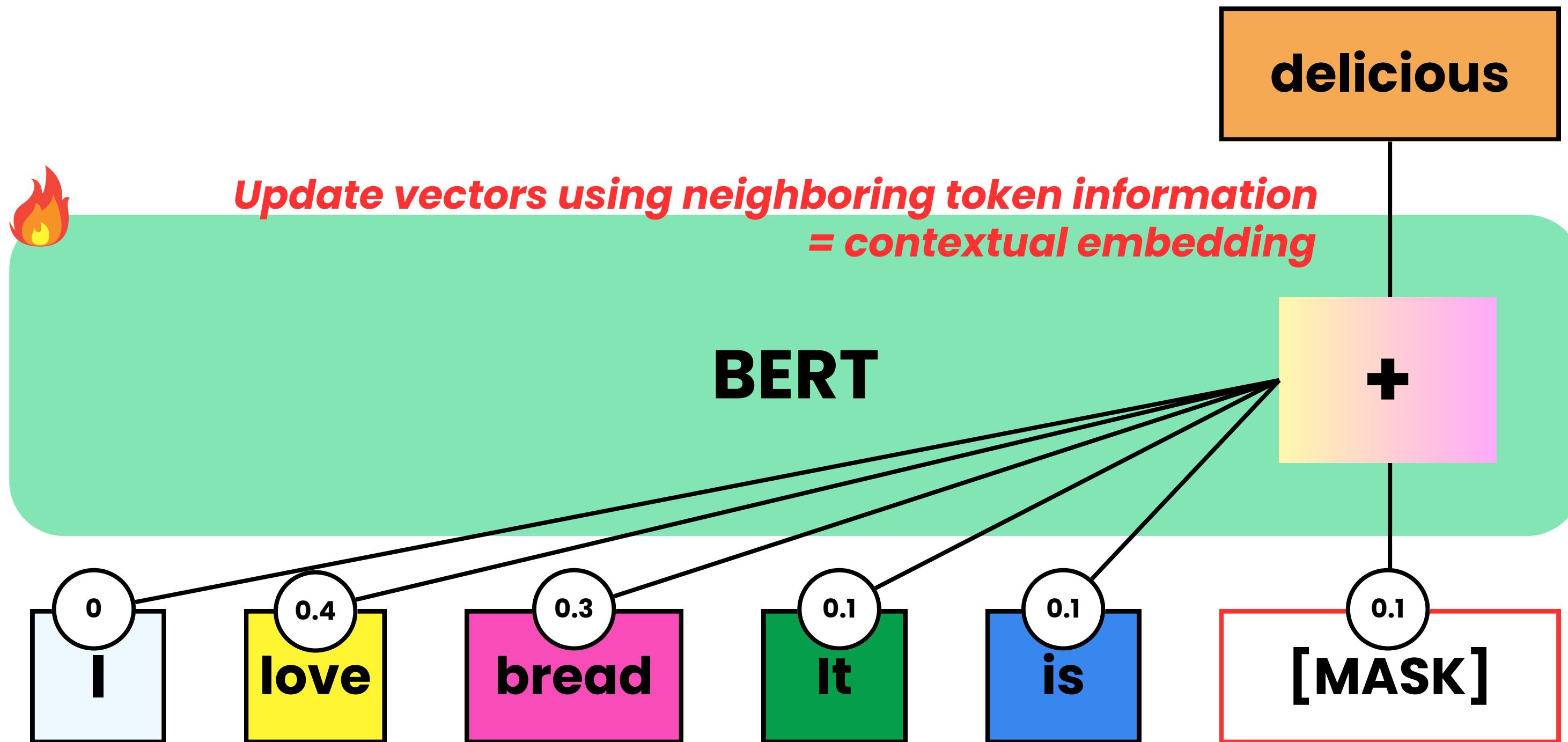
TECHNICAL BACKGROUND

RETRIEVAL AUGMENTED GENERATION – RETRIEVAL



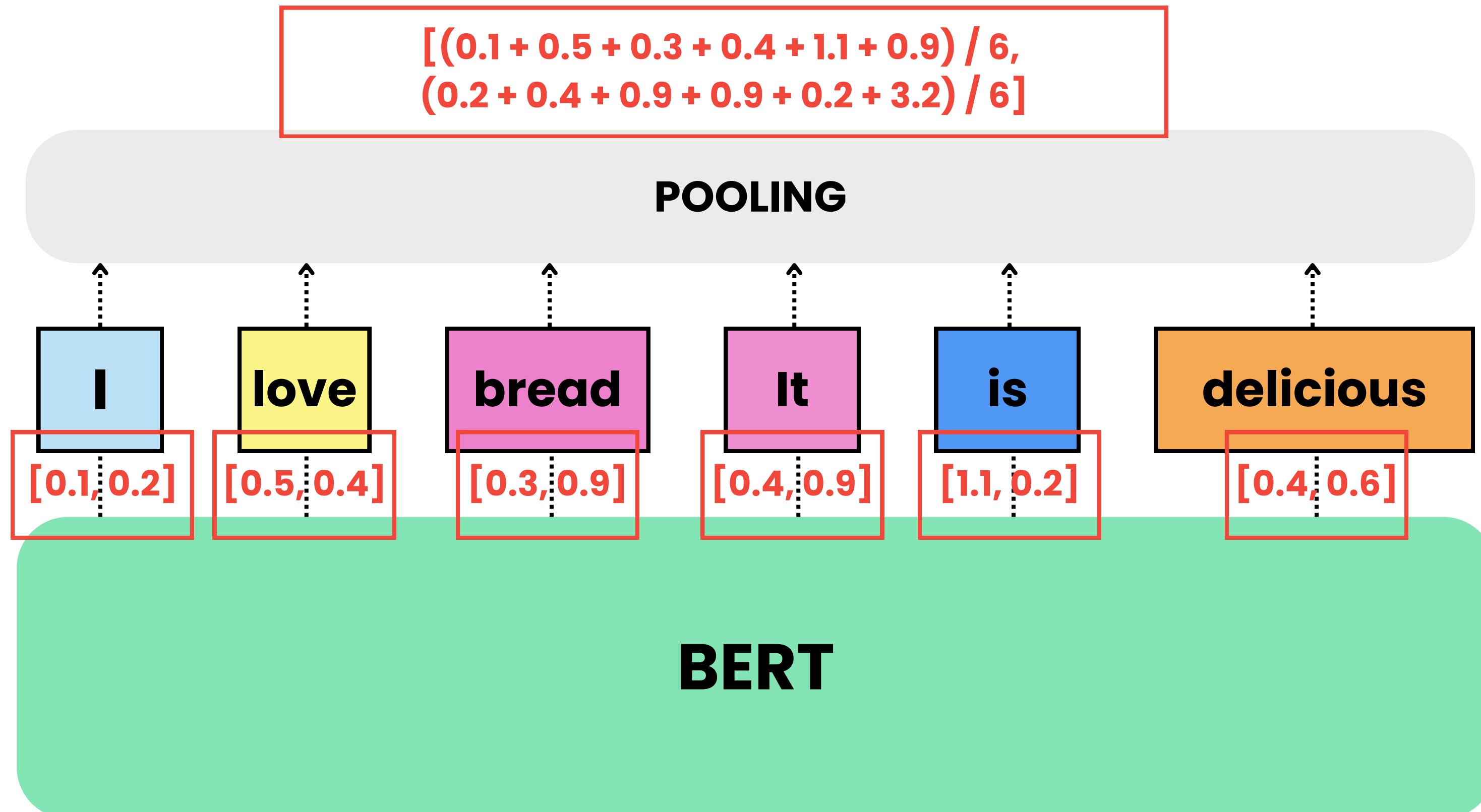
TECHNICAL BACKGROUND

RETRIEVAL AUGMENTED GENERATION – RETRIEVAL



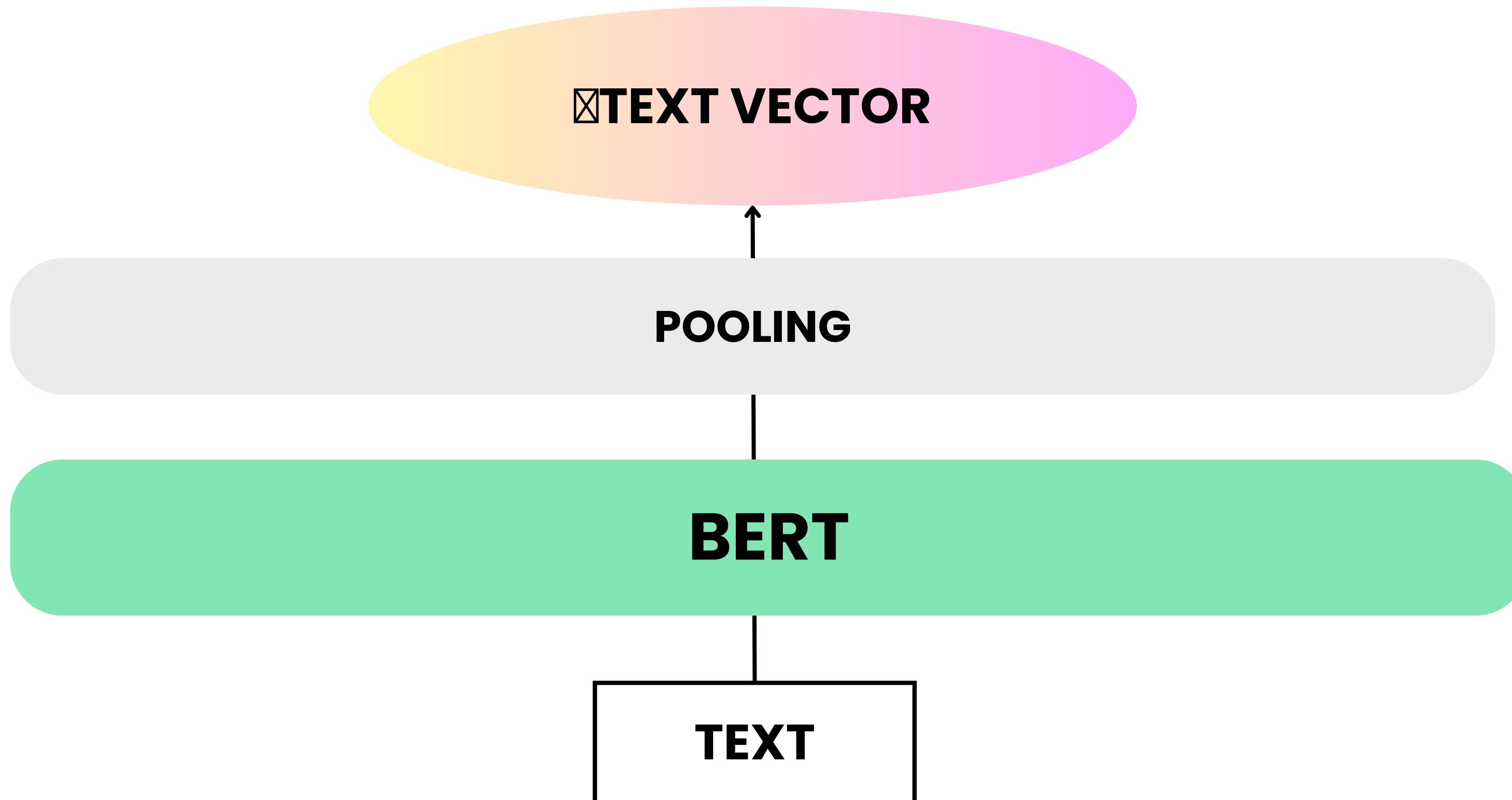
TECHNICAL BACKGROUND

RETRIEVAL AUGMENTED GENERATION – RETRIEVAL



TECHNICAL BACKGROUND

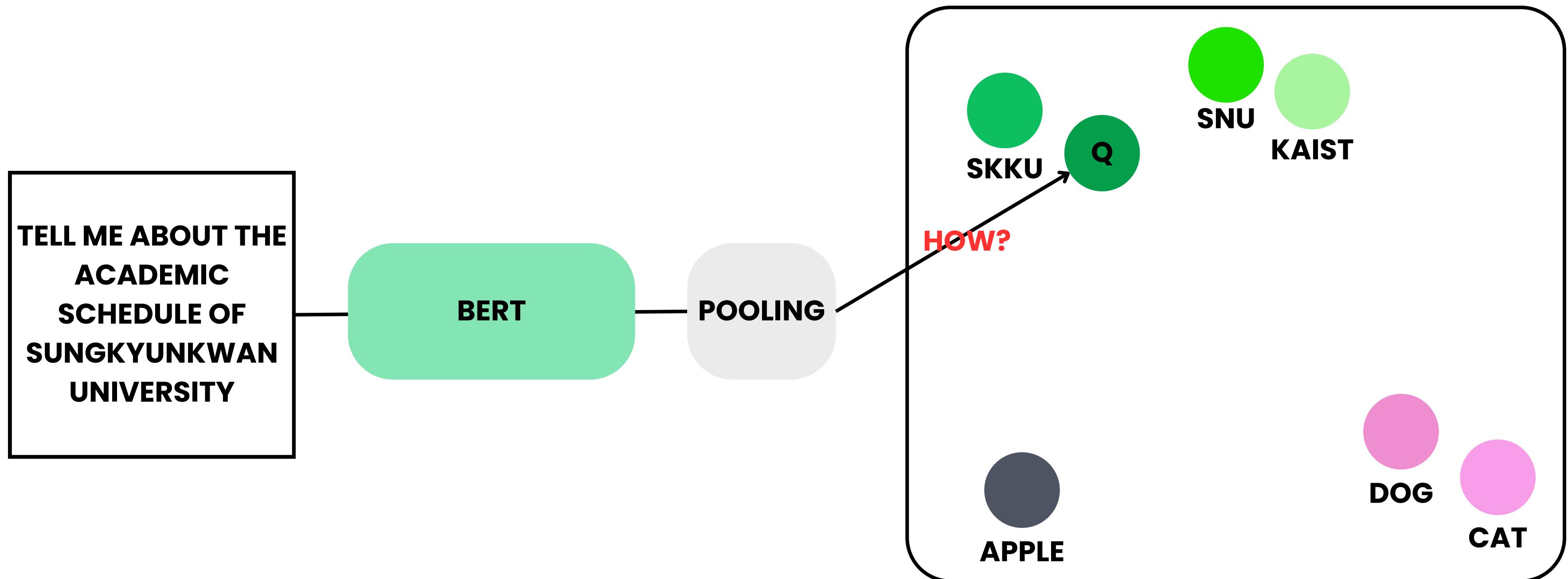
RETRIEVAL AUGMENTED GENERATION – RETRIEVAL



TECHNICAL BACKGROUND

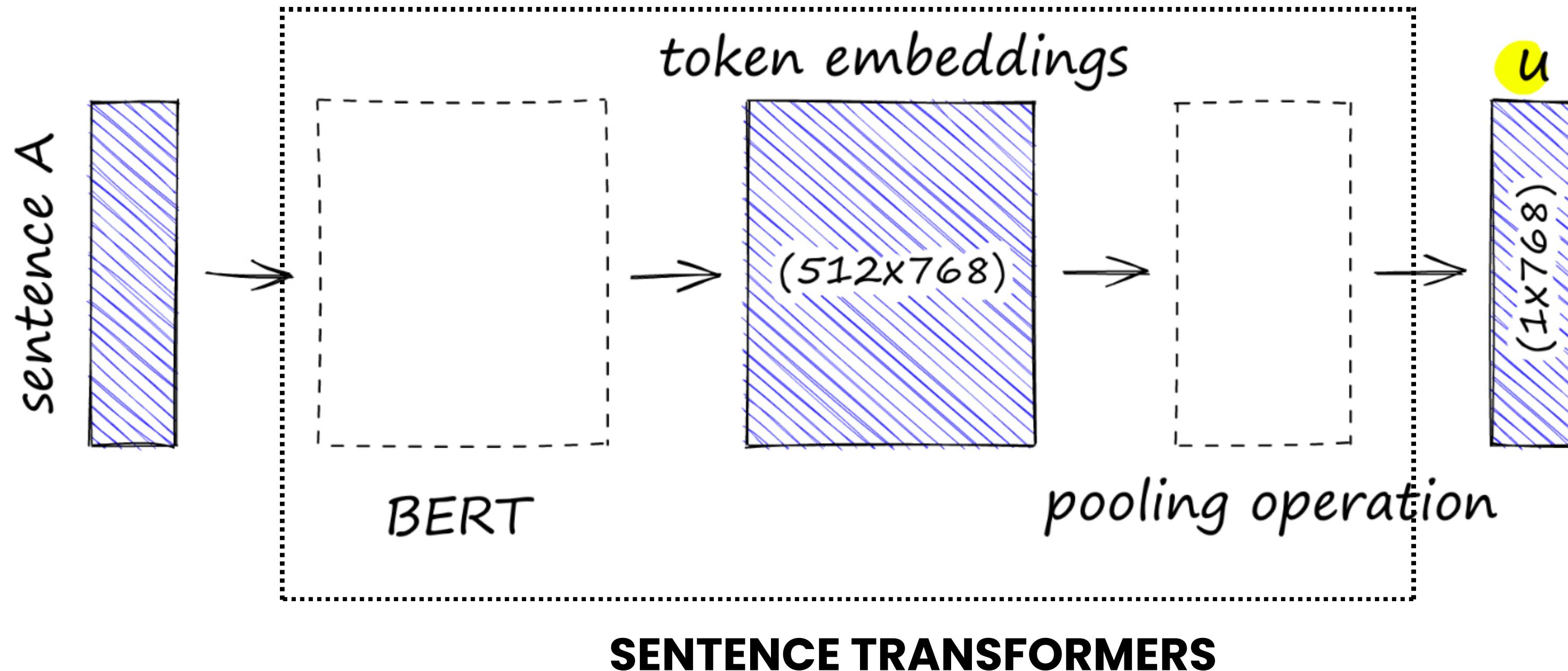
RETRIEVAL AUGMENTED GENERATION – RETRIEVAL

VECTOR SPACE



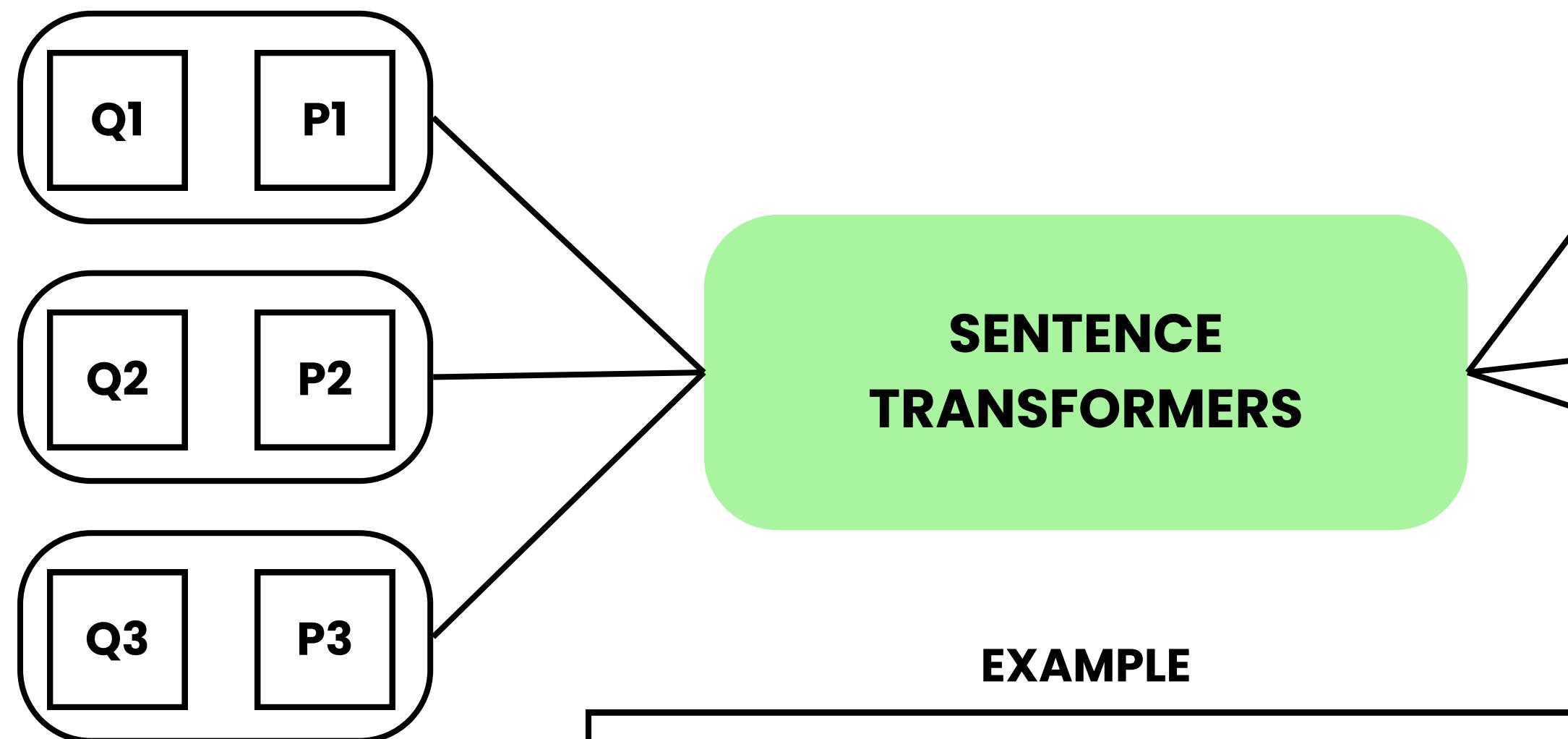
TECHNICAL BACKGROUND

RETRIEVAL AUGMENTED GENERATION – RETRIEVAL

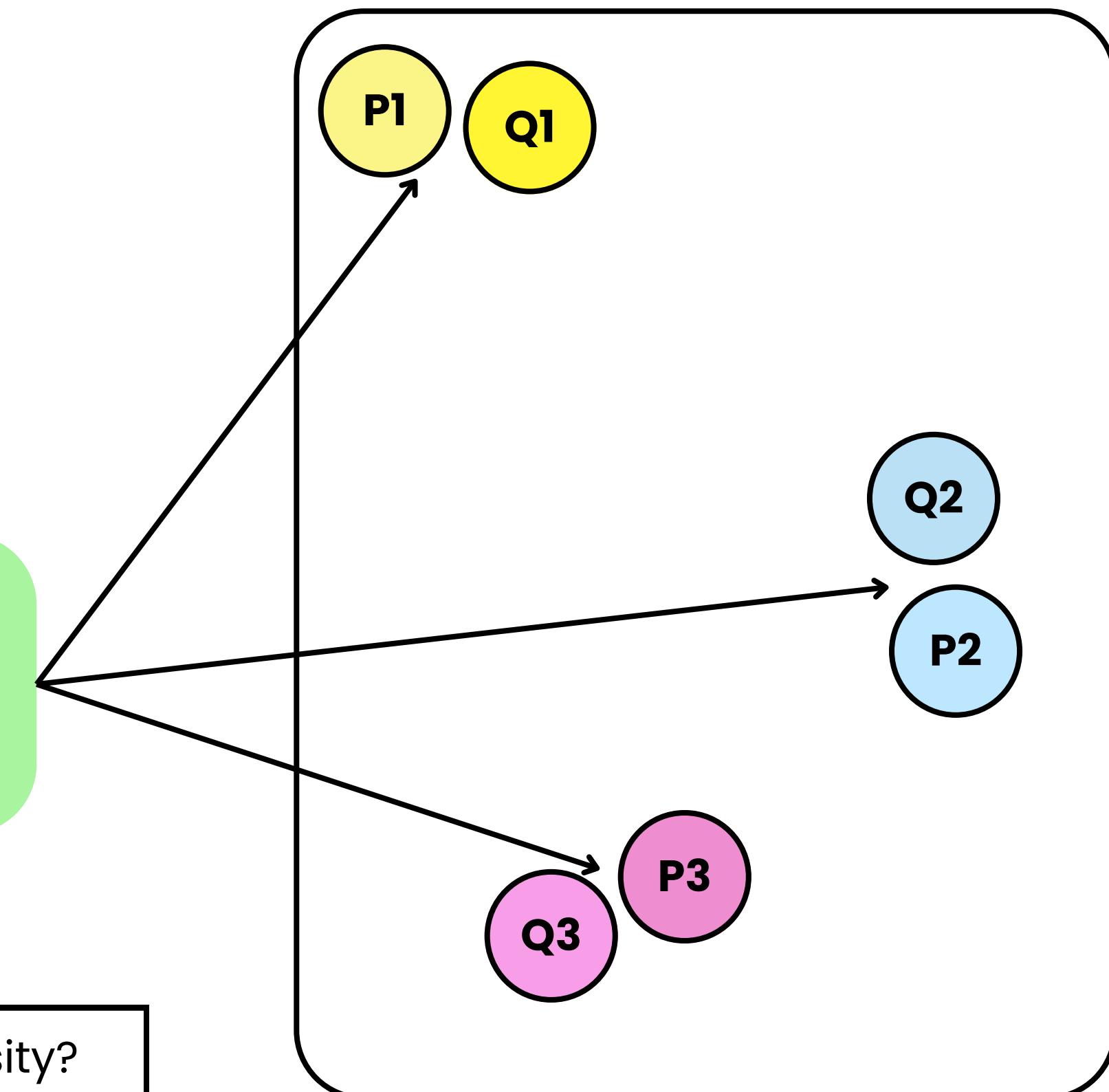


TECHNICAL BACKGROUND

RETRIEVAL AUGMENTED GENERATION – RETRIEVAL



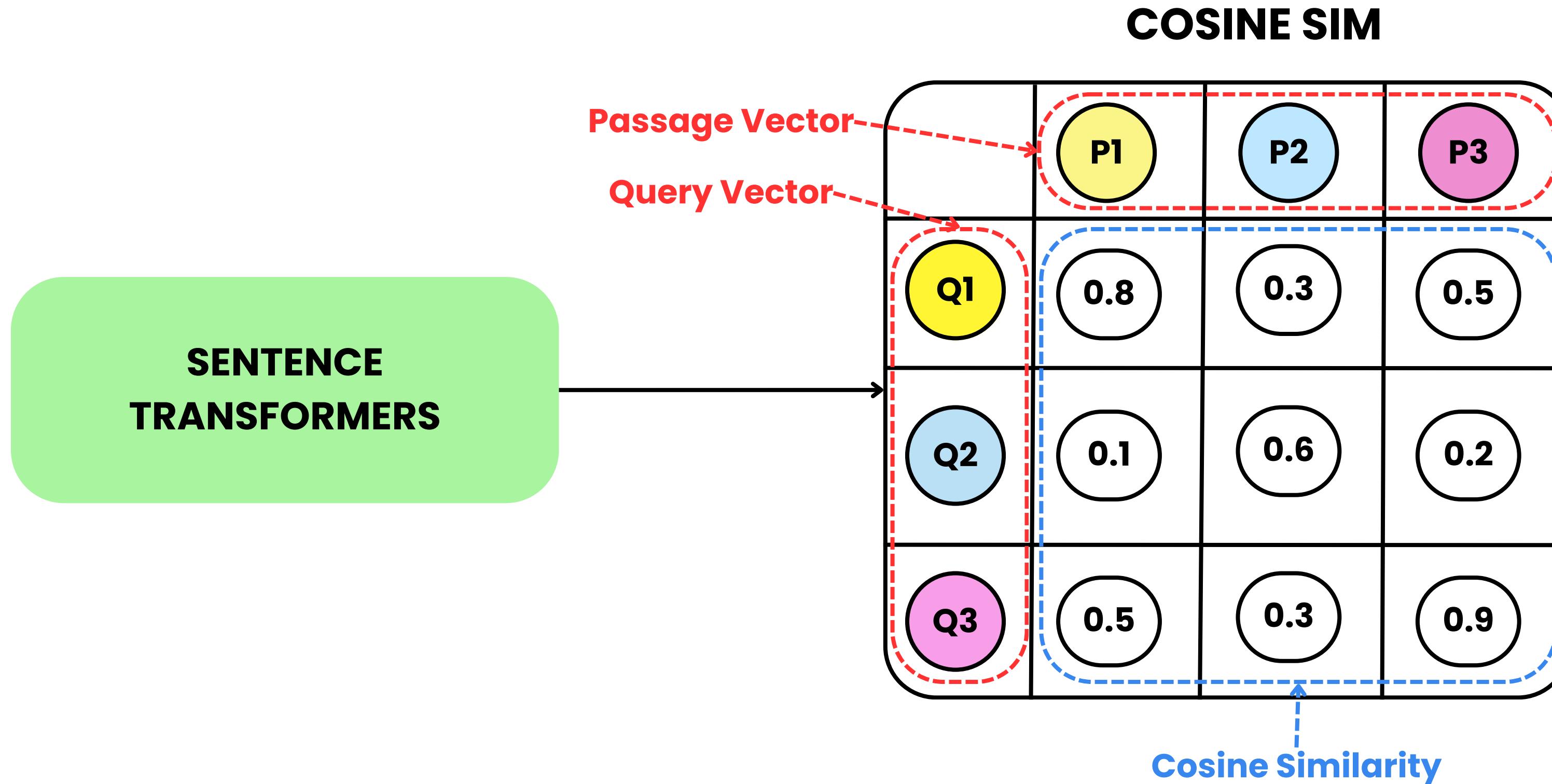
VECTOR SPACE



TECHNICAL BACKGROUND

RETRIEVAL AUGMENTED GENERATION – RETRIEVAL

$$\text{similarity} = \cos(\theta) = \frac{A \cdot B}{\|A\| \|B\|}$$

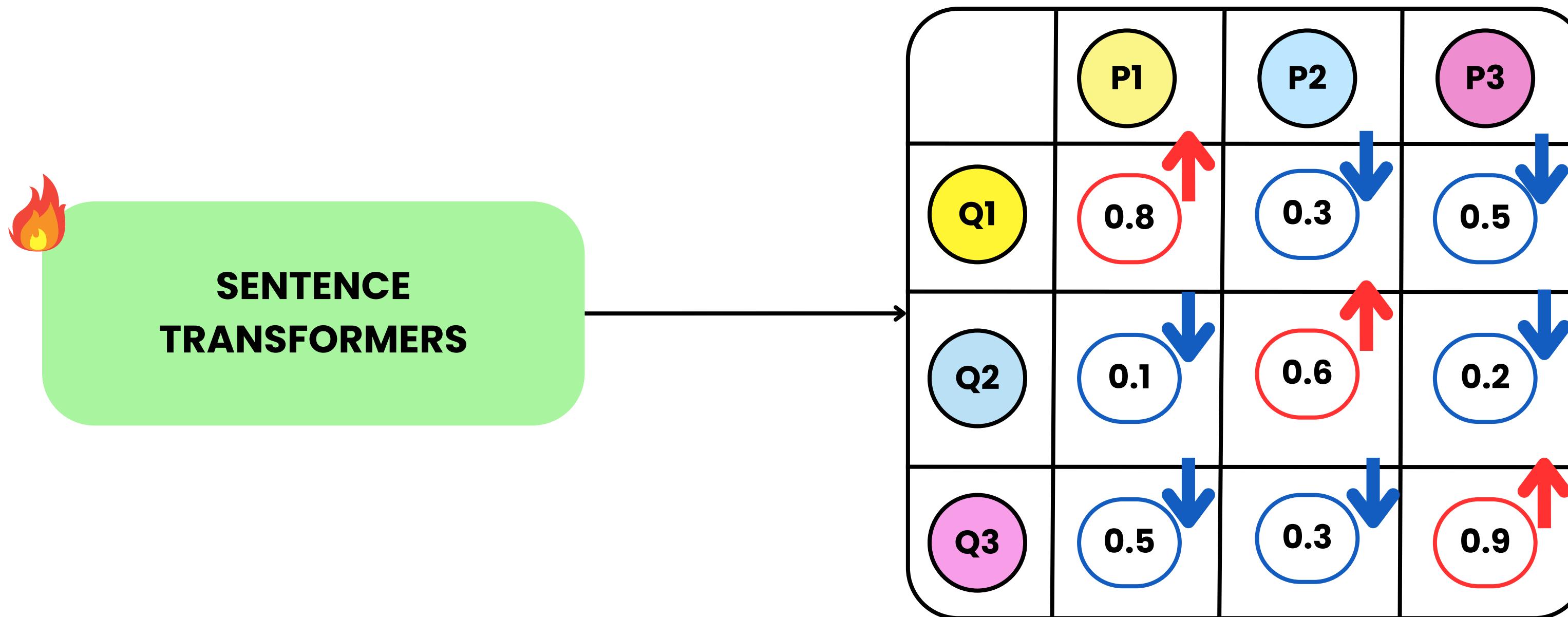


TECHNICAL BACKGROUND

RETRIEVAL AUGMENTED GENERATION – RETRIEVAL

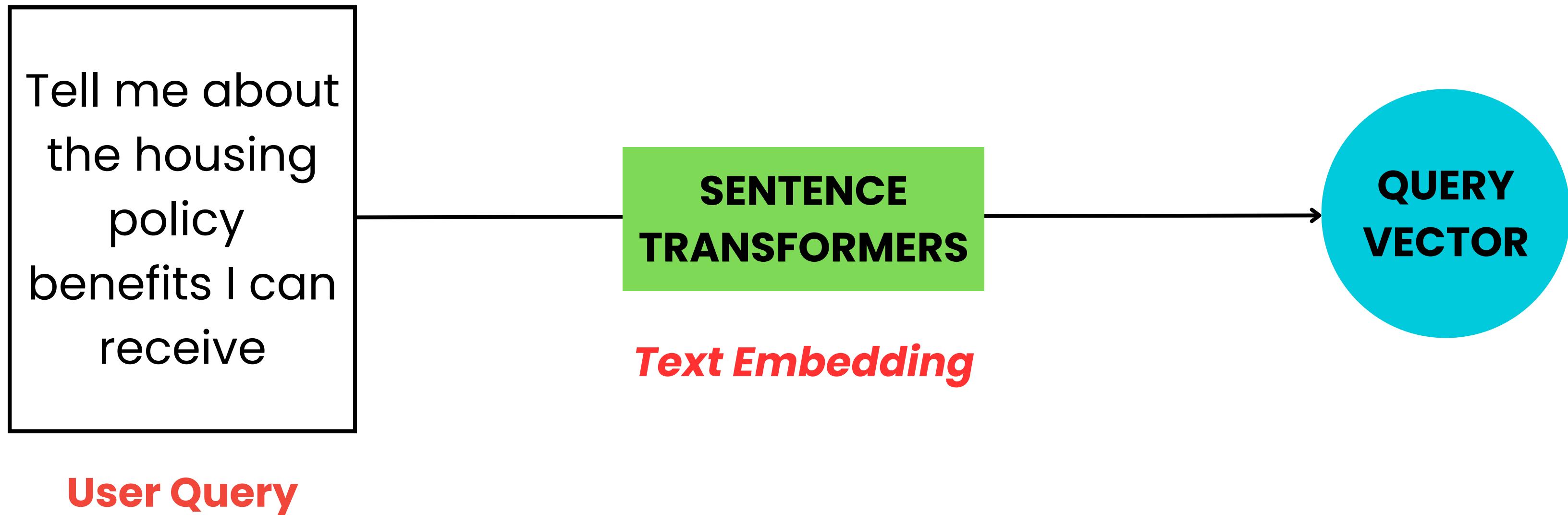
$$\text{similarity} = \cos(\theta) = \frac{A \cdot B}{\|A\| \|B\|}$$

COSINE SIM



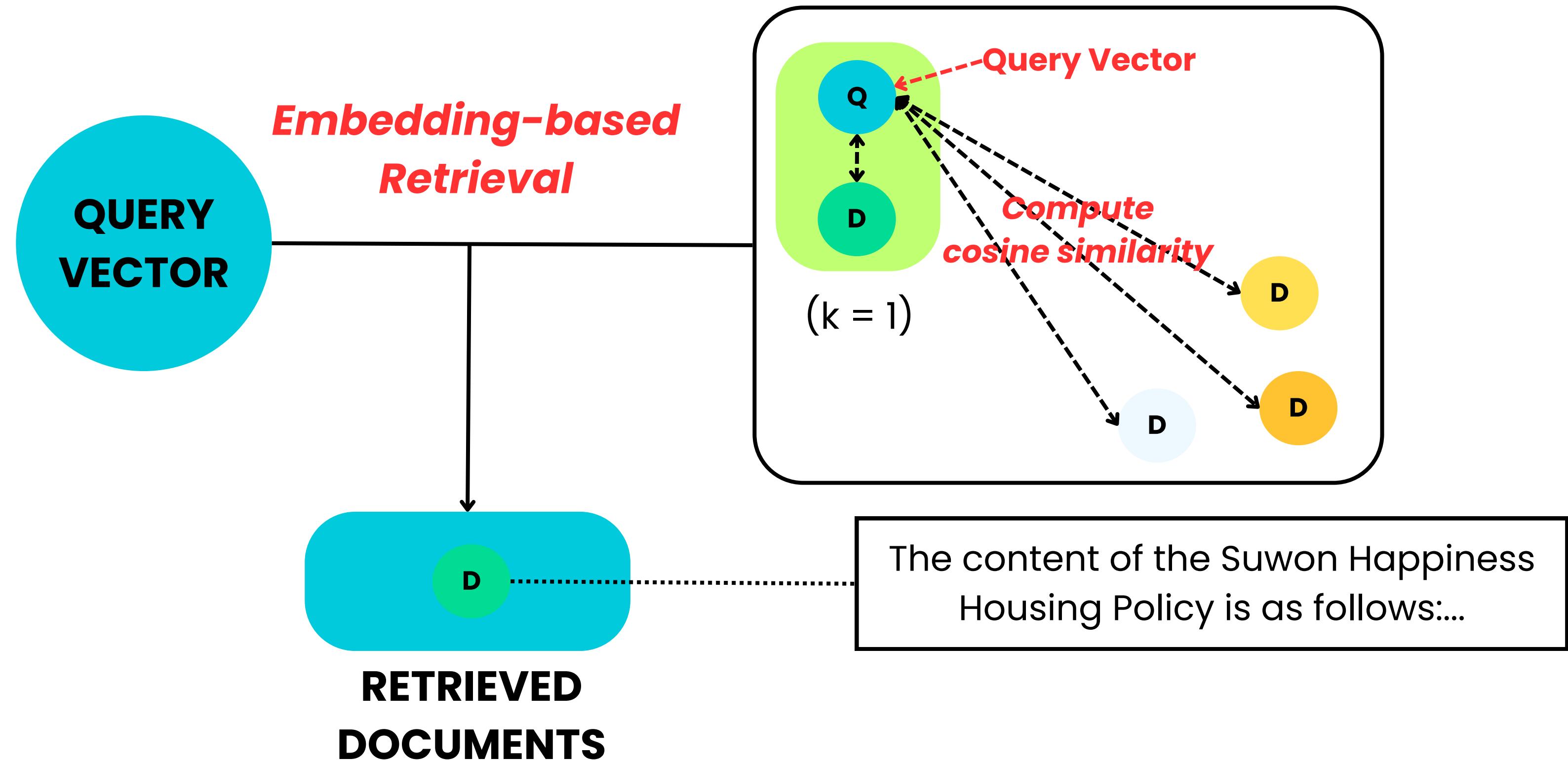
TECHNICAL BACKGROUND

RETRIEVAL AUGMENTED GENERATION – RETRIEVAL



TECHNICAL BACKGROUND

RETRIEVAL AUGMENTED GENERATION – RETRIEVAL



TECHNICAL BACKGROUND

RETRIEVAL AUGMENTED GENERATION – GENERATION

Answer the user's questions using the given context.

Context:

The content of the Suwon Happiness Housing Policy is as follows:...

Question:

Tell me about the housing policy benefits I can receive

Prompt Template

GPT-4

RESPONSE

Retrieved information from external knowledge source

User Query

FRONT-END

HOME PAGE

The screenshot shows the front-end home page of a service called "CHAT - PUB". The page has a clean, modern design with a white background and a black header bar.

Header: The header features a vertical sidebar on the left containing icons for a profile picture, a house, a message bubble, and a search function. The main title "CHAT - PUB" is centered above a version number "Ver 1.0 Oct 120".

Visual Elements: A large blue and green speech bubble icon is positioned above the title.

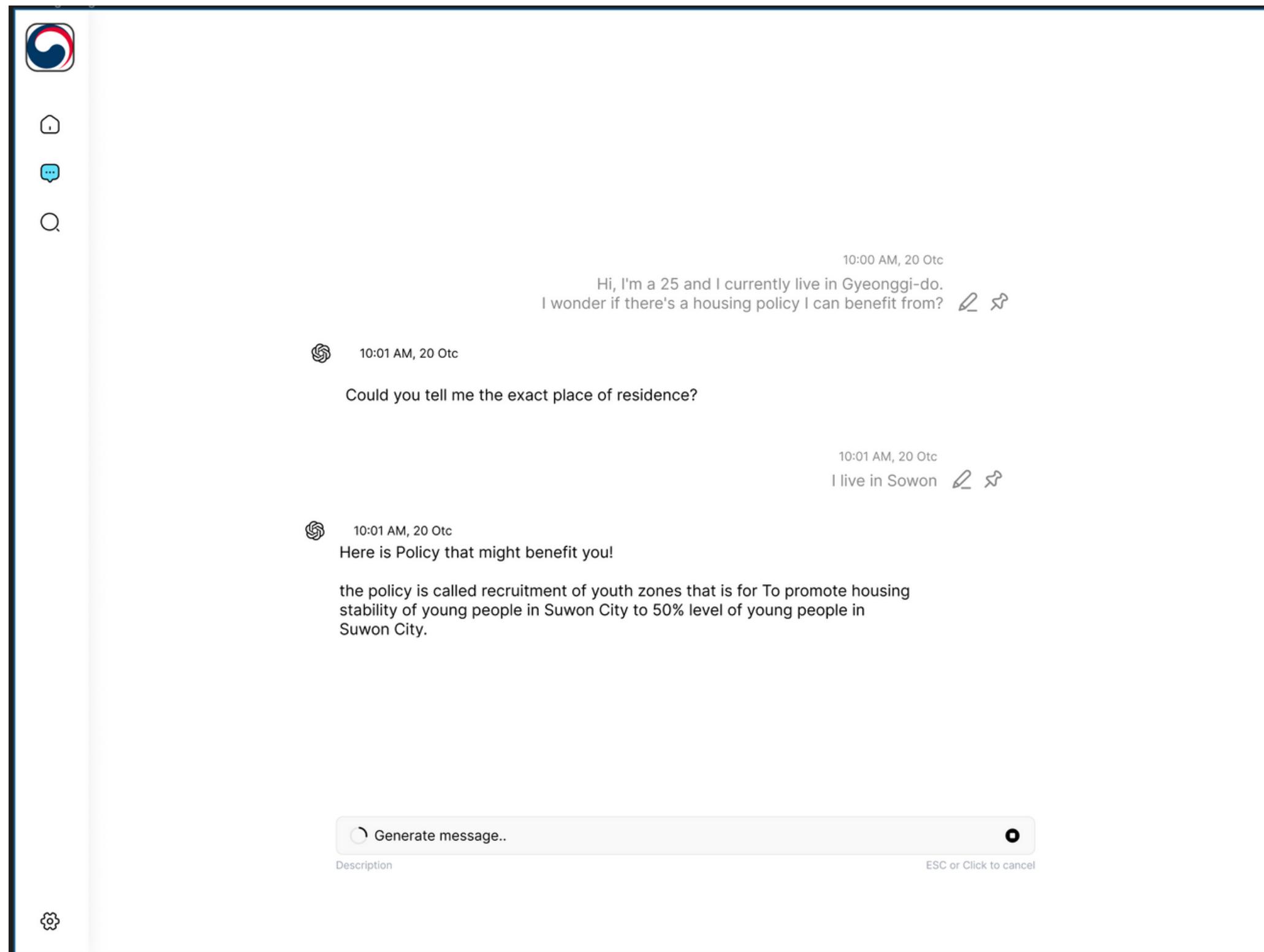
Content Sections: The page is organized into several sections:

- Examples:** Shows a sample user query: "What are some policies that will benefit me?" followed by a link icon.
- Capabilities:** Describes the AI's ability to remember previous conversations and provide follow-up corrections.
- Limitations:** Notes that the AI may occasionally generate incorrect information or produce harmful instructions.
- Bottom Buttons:** Includes a "Send a message" button with a pen icon and a "New dialog" button with a megaphone icon.

Footer: A small gear icon is located at the bottom center of the page.

FRONT-END

MESSAGE PAGE



BACK-END

MEMBERSHIP REGISTRATION AND PROCESSING CONVERSATIONS



 FastAPI

The FastAPI logo icon is a teal circle containing a white lightning bolt symbol.

Postgre^{SQL}

The word "Postgre" is in black and "SQL" is in blue, matching the color of the elephant's body.

PROJECT SCHEDULE

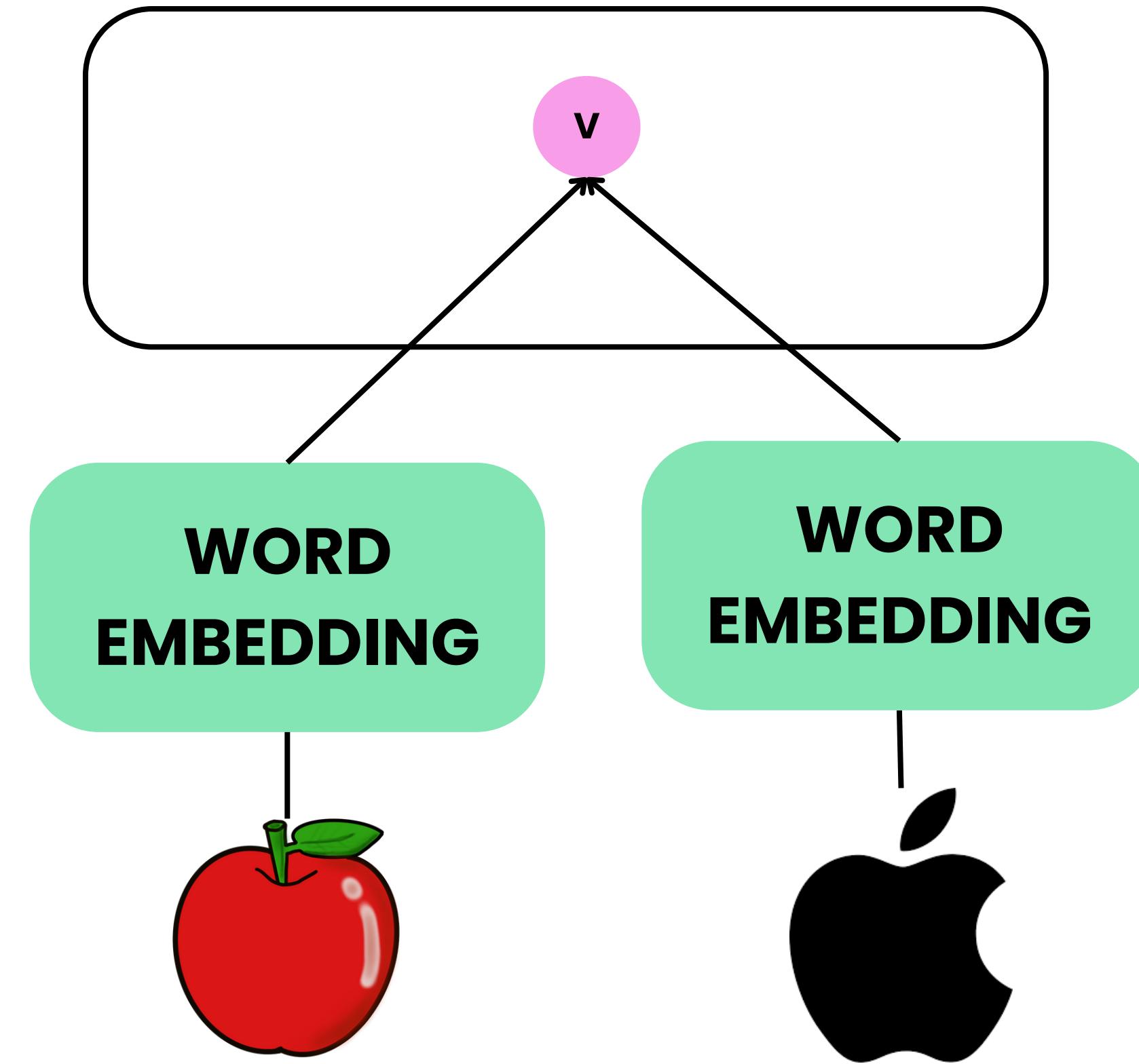


QUESTIONS & ANSWERS



APPENDIX

VECTOR SPACE



APPENDIX

VECTOR SPACE

